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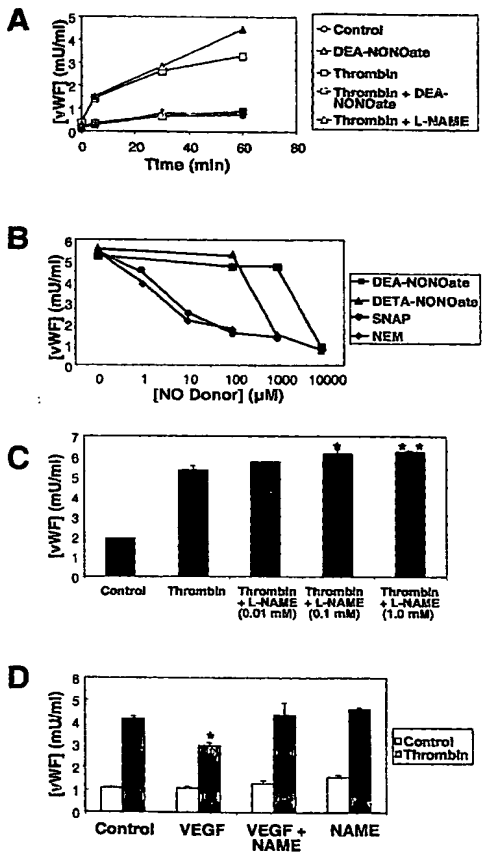
(54) Title: INHIBITORS OF N ETHYLMALEIMIDE SENSITIVE FACTOR



(57) Abstract: Methods and compositions for blocking exocytosis by inhibition of proteins that regulate exocytosis, such as N-ethylmaleimide Sensitive Factor (NSF), are provided. The compositions include multidomain fusion peptides containing a domain that causes the fusion peptide to cross the cellular membrane (e.g. a domain from the TAT protein of HIV) and a domain that inhibits NSF (e.g. a domain of NSF). Administration of the fusion peptide promotes anticoagulation, attenuates thrombosis, and decreases heart attack severity.

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